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Class

THE CARROLL DUMPING APPARATUS

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FOR DUMPING
WAGONLOADS AND CARLOADS OF

Sugar Beets, Sugar Cane, Coal, Coke
Corn and Other Grain::::
Lime, Ore, Rock, Etc.

FOR LOADING

Ships, Boats and Cars
and Filling Bins

TIMOTHY CARROLL
INVENTOR AND OWNER
ANAHEIM, ORANGE COUNTY, CALIFORNIA

LIBRARY OF THE UNIVERSITY

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THE...CARROLL DUMP

FOR DUMPING.....
WAGONLOADS AND CARLOADS OF

SUGAR BEETS, SUGAR CANE, COAL, COKE
CORN AND OTHER GRAIN
LIME, ORE, ROCK, ETC.

FOR LOADING.....

SHIPS, BOATS AND CARS
AND FILLING BINS

PATENTED....

JUNE 2, 1896
DECEMBER 7, 1897
DECEMBER 30, 1902
DECEMBER 15, 1903
JANUARY 5, 1904

TIMOTHY CARROLL
INVENTOR AND OWNER
Anaheim, Orange County, California

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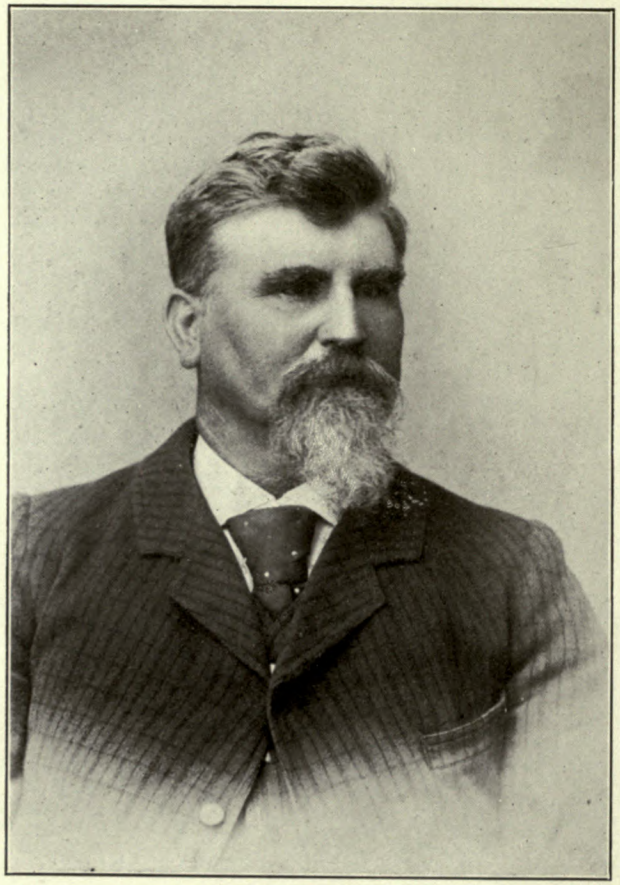

TIMOTHY CARROLL

INVENTOR AND SOLE OWNER OF THE CARROLL LOAD DUMPING APPARATUS

Gift
Carroll

THE CARROLL DUMP

LIBRARY OF THE UNIVERSITY OF CALIFORNIA

The dumping apparatus which has proven such a boon to the raisers and shippers of sugar beets in Southern California is also invaluable for saving time, labor, and money to shippers of any commodity which is shipped in bulk; and these few illustrations with the accompanying letters of commendation are presented to the public with the view of introducing this remarkable invention into general use throughout the United States.

The great importance of this invention will be better understood when the circumstances which called it forth are related. These are as follows:

In 1893 a large beet sugar factory was built at Chino, in San Bernardino county, California, and the business of raising sugar beets to supply this factory became a very important industry throughout the country for many miles around. Thousands of acres of beets were cultivated in Orange county, which adjoins San Bernardino county, and the station at Anaheim, Mr. Carroll's home, became an important shipping point at which thousands of tons of beets were loaded upon the railway cars for transportation to Chino. These beets were brought by the farmers in large wagonloads drawn by from two to six horses.

In order to unload the beets from the wagon a net was laid in each wagon before the beets were loaded, and one side of the net was fastened to the wagon. At the station an inclined apron was arranged at one side of the car, and the wagon was drawn up alongside the apron with the free edge of the net away from the apron. The free edge was then grappled by a derrick and drawn upward until the net was in a perpendicular position, thereby causing the beets to fall on to the apron, down which they slid into the car. This was the most rapid mode known at that time for unloading the beets, and it is still in vogue in beet raising localities where the Carroll Dump has not been introduced.

This mode of unloading, however, is so slow that it was found impossible to serve the teams at Anaheim as fast as they came; and so large numbers of teams had to await their turn and often thirty loaded wagons would be seen waiting over night to take their turn next morning.

In 1894 Mr. Timothy Carroll, the inventor of this valuable dump, had about one thousand tons of beets to ship, and having previously invented and patented numerous labor-saving devices of various kinds, he determined to avoid waiting in line with his neighbors, and so setting to work to solve the problem, he built a private dump for his own use, embodying the principal features of the present improved machine; and by this first crude dump his thirteen-year-old boy was able to unload a five-ton load from his wagon into the car on the railroad track in one minute with the aid of the teamster only.

The wonderful success of this private dump caused the farmers of that vicinity to immediately make arrangements to profit by this invention; and under Mr. Carroll's direction, a large dump was built from which all of the Anaheim beet crop was dumped the next season, and no team had to wait its turn, because the loads were dumped as fast as the teamsters could drive on and off the dump.

Another dump was built at Buena Park the same season (1895), and Mr. Carroll immediately proceeded to protect his rights by United States patents, the dates of which are given on the title page of this pamphlet.

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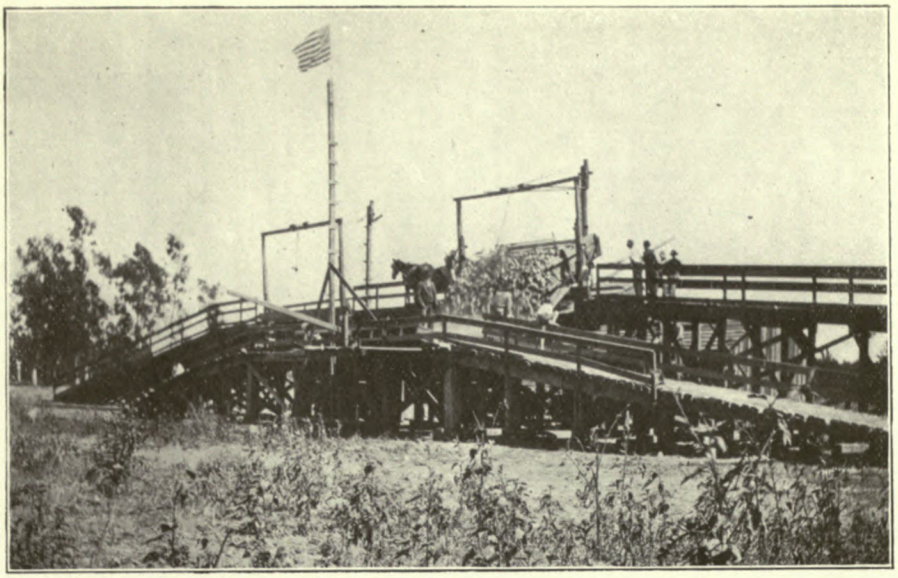
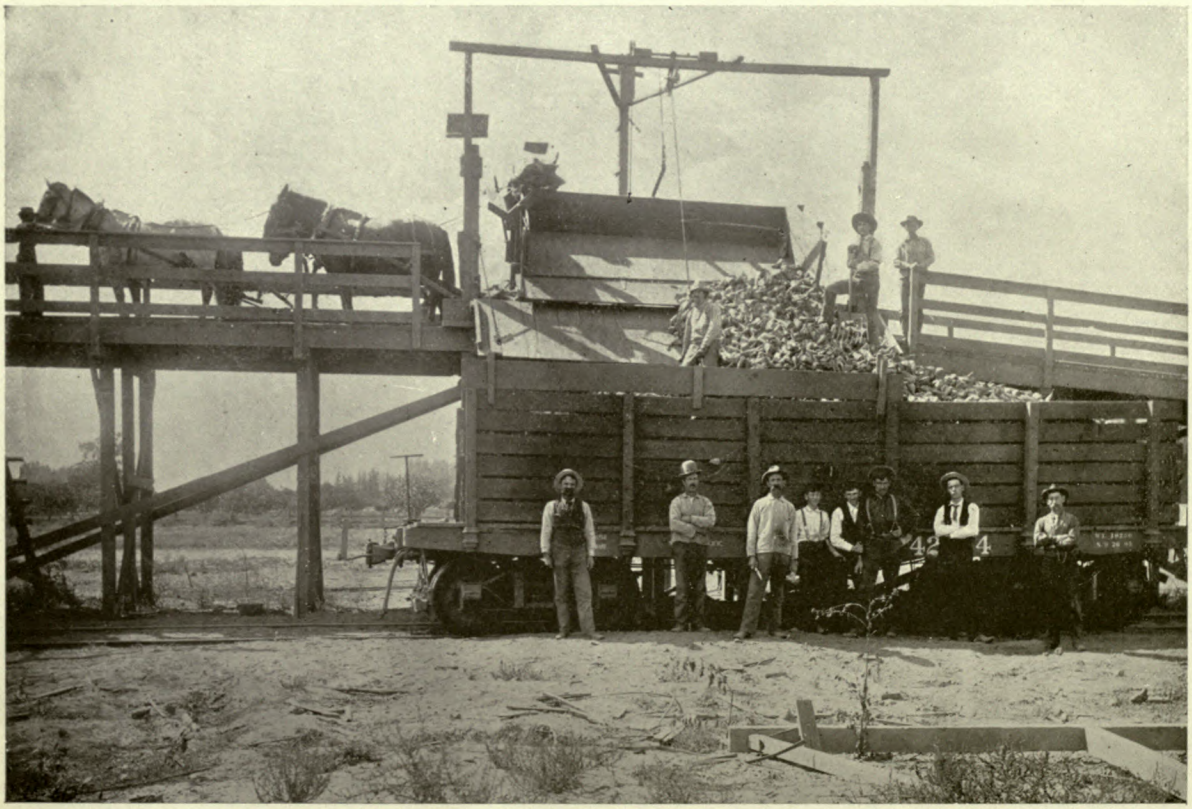
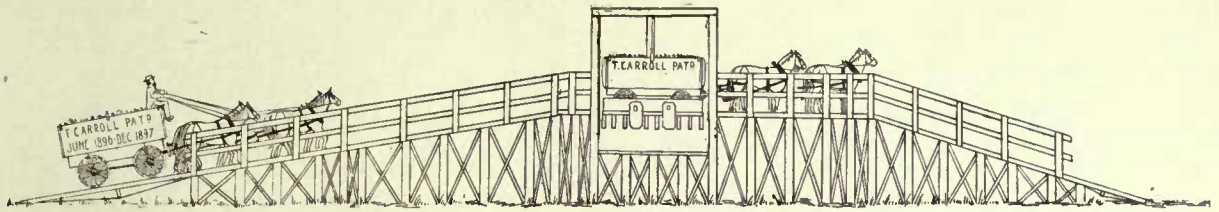


THE FIRST CARROLL DUMPS, ANAHEIM, CAL.

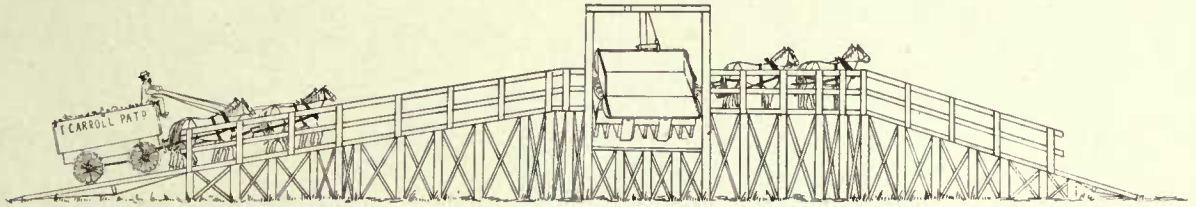


UNLOADING SUGAR BEETS. THE CARROLL DUMP IN USE AT ANAHEIM

THE CARROLL WAGON DUMP

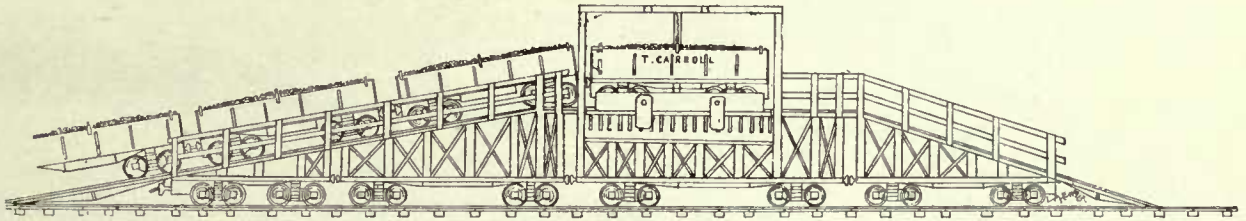


BEFORE DUMPING

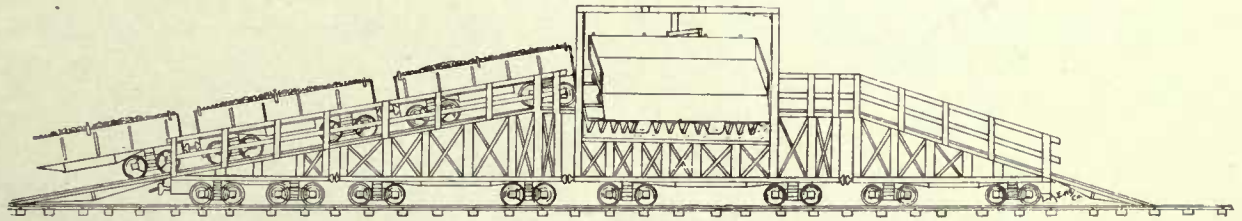


AFTER DUMPING

THE CARROLL PORTABLE DUMP — For Railroad Cars



BEFORE DUMPING

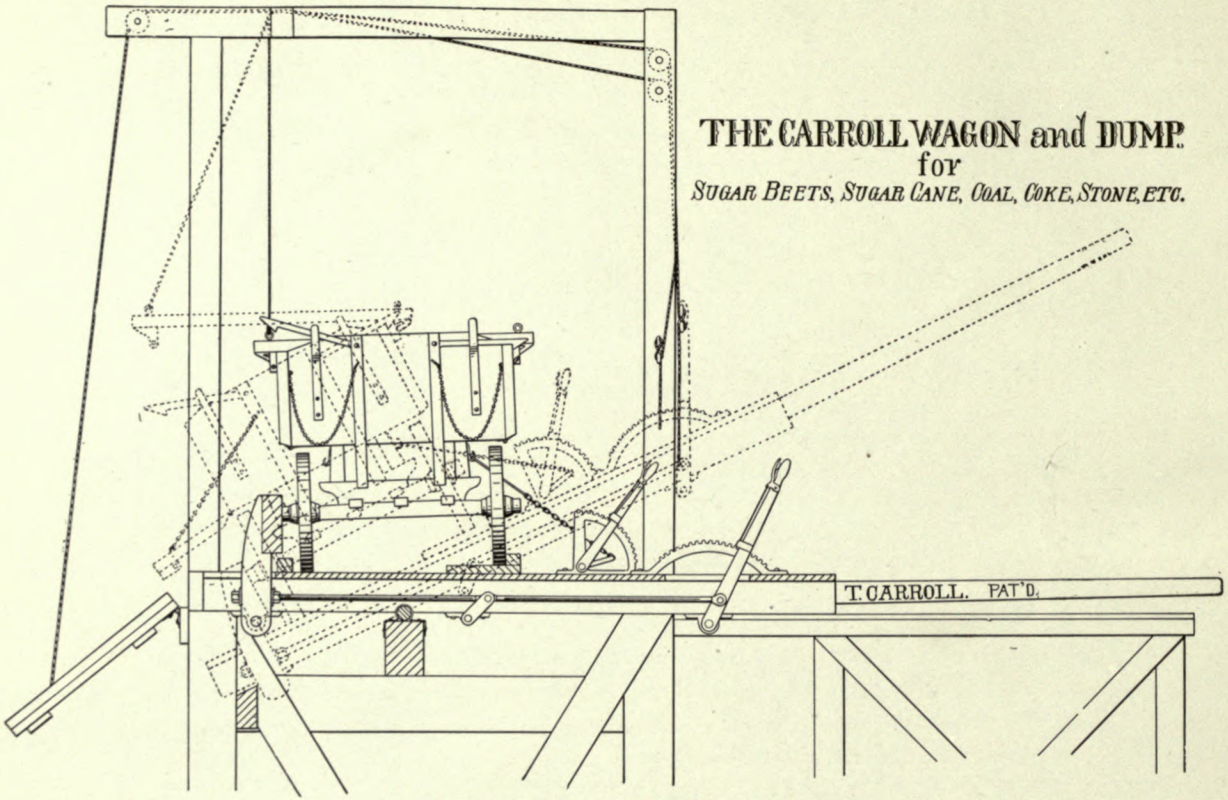


AFTER DUMPING

THE CARROLL WAGON and DUMP.

for

SUGAR BEETS, SUGAR CANE, COAL, COKE, STONE, ETC.



SHOWING TILTING FRAME AND OPERATING LEVER

This dump has rapidly gone into use under the protection of Mr. Carroll's patents and is now used at numerous stations in Southern California and elsewhere by the following factories:

American Beet Sugar Co.... ..... { Chino, Cal. / Oxnard, Cal. / Rocky Ford.
Cudahy Co., Florence, Cal.
California and Hawaiian Sugar Refining Co ....Crockett, Cal.
Great Western Sugar Co.....Loveland, Colo.
National Sugar Mfg. Co..... .....Sugar City, Colo.
Eaton Sugar Co.....Eaton, Colo.
Longmont Sugar Co.....Longmont, Colo.
Fort Collins-Colorado Sugar Co.....Fort Collins, Colo.
Winsor Sugar Co.....New Winsor, Colo.

We illustrate herein a few of these dumps in operation.

This invention is specially adapted for unloading bulk loads of unwieldy products such as sugar-cane, which cannot otherwise be handled except by very laborious means. Its value for use for loading and unloading cars of coal, coke, stone, and corn, and other kinds of grain, will be apparent from the accompanying cuts.

To unload a wagonload or carload by means of this dump, the wagon or car is first run upon the dump. In the case of a wagon the team is not unhitched, but remains standing on a solid platform while the load is being dumped. When the vehicle is upon the dump an attendant will hook a rope or chain, which hangs above the platform for the purpose, to a catch which holds the side of the vehicle-bed in place. Then he will throw a lever which brings a support against the hubs of the wheels, or in case of a car it may be brought against a suitable part of the truck frame. Then another lever is thrown, thus tipping the dump platform and the vehicle sidewise. As the vehicle tips, the catch is held by the chain and is released, the side of the wagon drops down and the load slides off; then the dump-lever is thrown down, thus bringing the wagon to upright position; the first lever is returned to its first position, thus releasing the hubs; the attendant throws the side of the wagon up into place, where it is caught by the catch provided for this purpose, and the teamster is ready to drive on.

A wagonload can readily be dumped in thirty seconds; and when the apparatus is worked steadily, a load, regardless of size, can be dumped every minute. The apparatus will dump a one-horse load or a ten-ton load with equal facility, excepting that ordinarily the dump is balanced to dump large loads and consequently is more easily operated for large loads than for small ones.

The operation of dumping a railway car is practically the same as that above described, with the exception that more powerful apparatus is used for operating the lever to return the dump to its upright position. A chain is also provided, in addition to the wheel support, for holding the car on the platform, aud is also preferably used on the wagon dump for additional security.

This apparatus is absolutely safe, and no accident has ever occurred with the use of any of Mr. Carroll's dumps. By this device no strain comes upon the flanges of the wheels of the car, and the car and wagon are not subjected to any strain whatever, the load sliding off gradually as the vehicle tips.

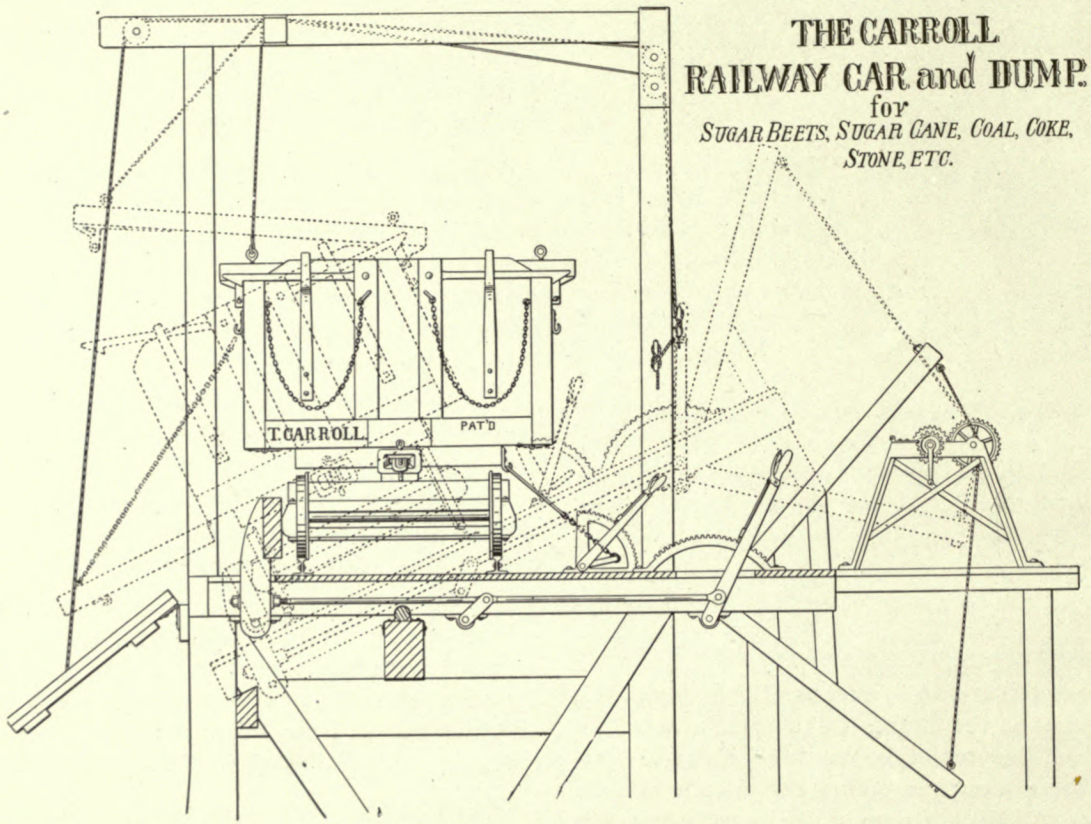
It will be seen that by means of this invention the load can be let off just as easily as may be desired.

An apron or chute is hinged to the dump frame, in position to receive the load as it is dumped, and can be made solid or with a screen bottom, to clean the beets or other material as they pass over the same.

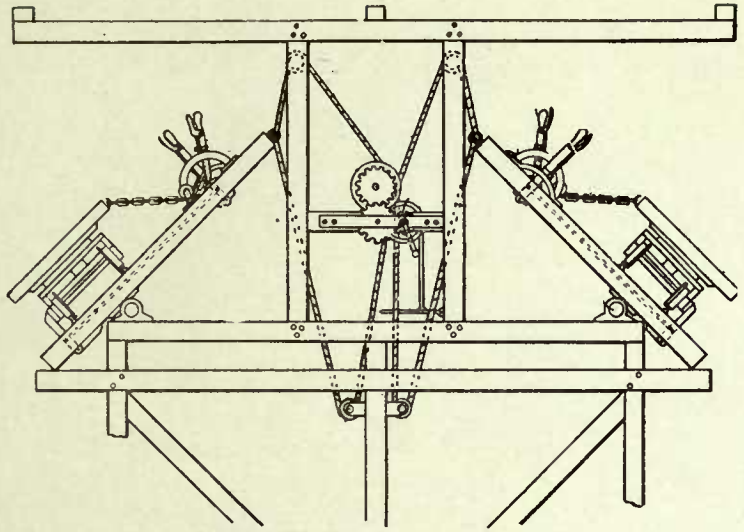
THE CARROLL RAILWAY CAR and DUMP.

for

Sugar Beets, Sugar Cane, Coal, Coke, Stone, etc.

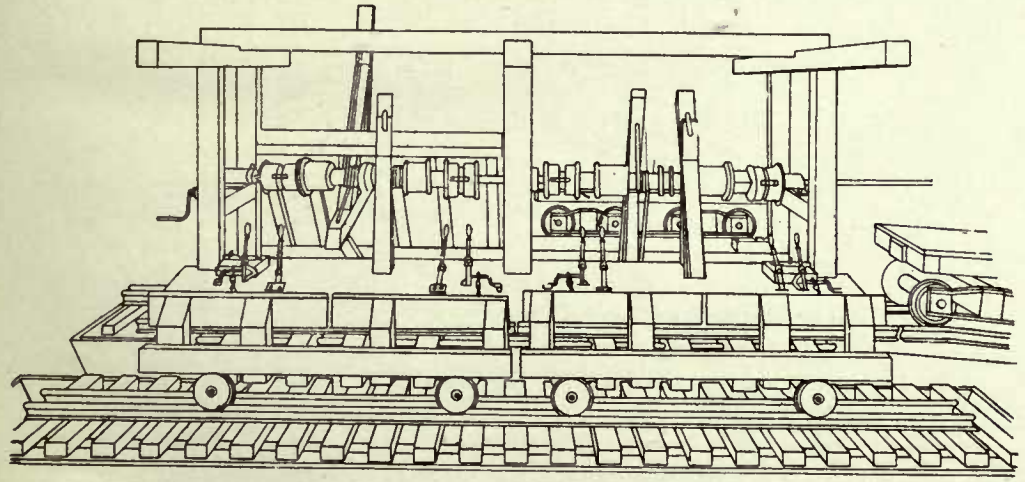


SHOWING TILTING FRAME AND BIFURCATED OPERATING LEVERS, FOR OPERATING BOTH WAYS



IMPROVED CARROLL DUMP

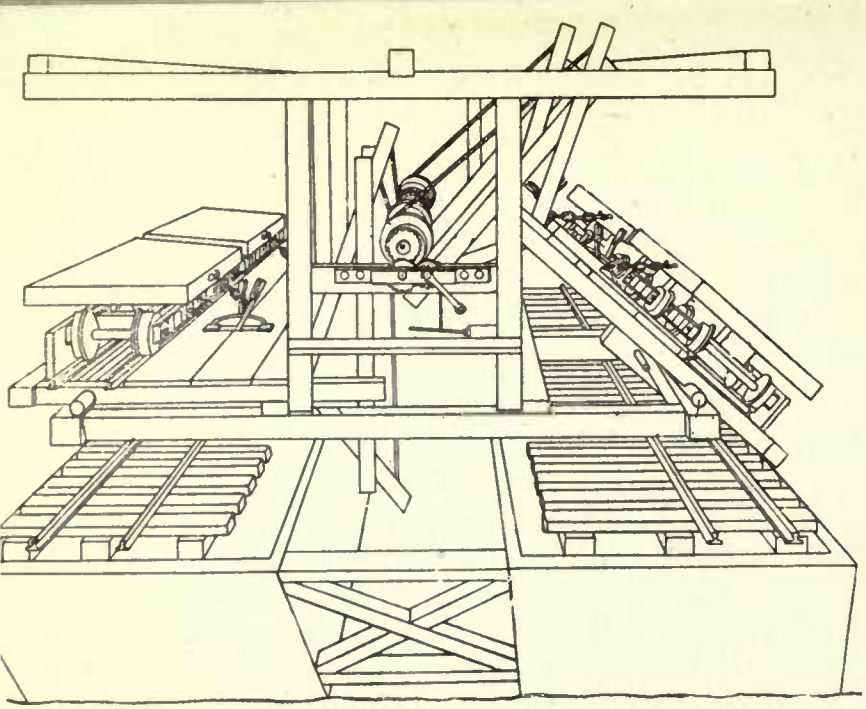
Dumping from either or both sides, and from any one car or a number of cars at the same time



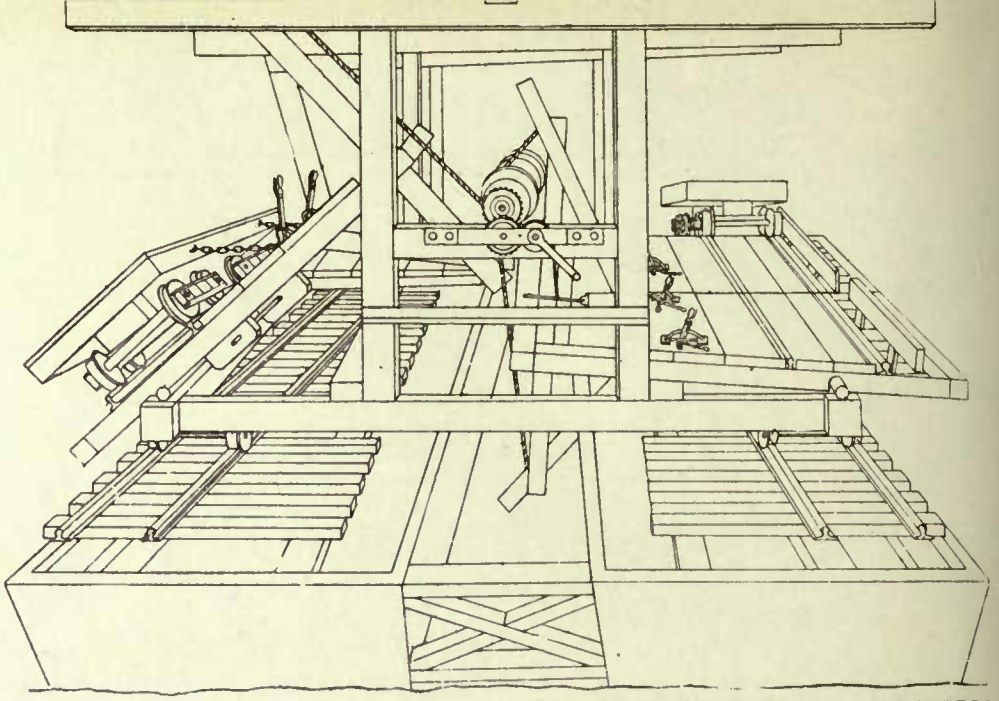
Shows Friction Clutches and Drums for dumping one or more cars at either side

An important feature of the Carroll system of dumping is that the load is dumped by its own weight, the tilting frame on which the wagon is placed being so pivoted that when the loaded wagon or car is driven on the dump the center of gravity is outside of the pivotal point, so that as soon as the holding cables are released the frame will tilt to dump the load. Then when the load is dumped, the loss of weight to the outside of the pivot will cause the frame and wagon or car to overbalance toward the inside of the pivot, and the frame will swing back to righted position. During both of these movements the frame is always under control of the brake, so that the speed either in dumping or "righting" can be regulated as desired.

No "power" is therefore needed to operate the system, either in dumping or "righting"—and the dump man only has to move the clutching and brake levers. In some cases the load may not be heavy enough to over-balance the frame and dump itself, and in that case the dump man can start it by a few turns of the winch handle.

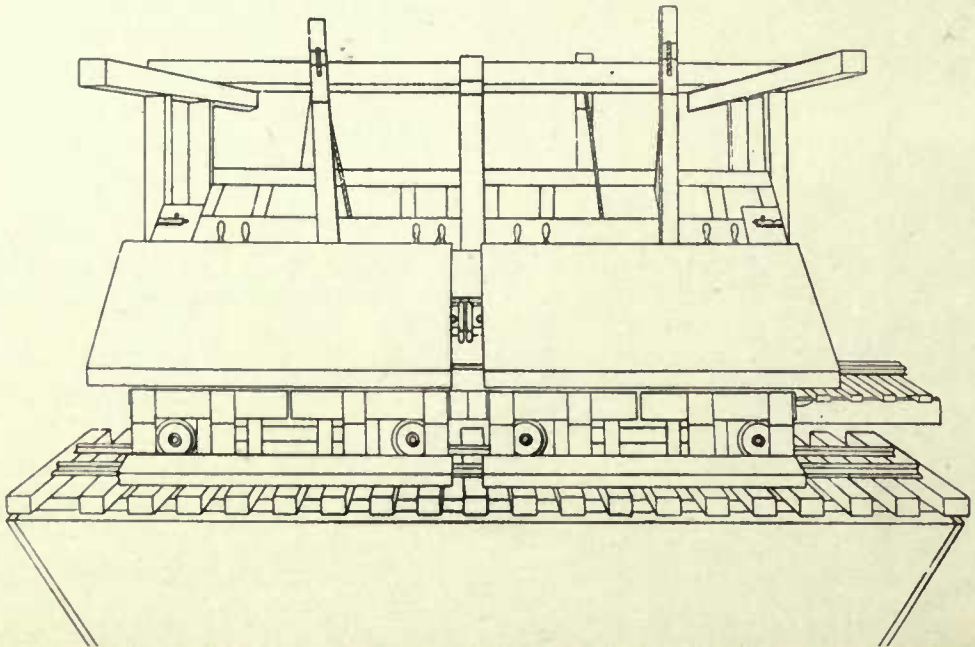


WING ON RIGHT, CARS BEING DUMPED;
ON LEFT, NOT DUMPED



SHOWING CARS ON RIGHT, NOT DUMPED;
ON LEFT, DUMPED

THE CARROLL DUMP
ON SCOWS
FOR LOADING VESSELS



For convenient use at side tracks, where the business is not sufficient to justify the erection of a dump, Mr. Carroll has provided a portable dump mounted upon car-trucks, and which can be drawn along the railroad from station to station and placed upon a side track, and there used until the beets at that station are loaded, after which the dump will be transported to other side track stations, and so on until the campaign is ended. By this means the farmers are given the privilege of a dump without having to haul a long distance and without the expense of building numerous dumps.

The benefit which this invention will be to railroads for handling their fuel is very great, as by means of it a carload of coal can be instantly dumped, and there is no danger of any of the parts getting out of order, and all of the parts are easy to be got at and cannot freeze up, as is often the case with the car having hopper-bottom dumps.

For use on wharves for loading vessels from cars or wagons, the value of this invention is inestimable. As may be seen from the illustrations, the portable dump is adapted to be moved from point to point along a wharf.

This invention can readily be applied in the handling of sugar cane, not only in the unloading of the same from cars or wagons, but also in placing the cane on carriers to be conveyed to the crushers, a tilting platform being arranged onto which the loads can be dumped, and from which the cane can be slid onto the carriers as desired, the inclination of the platform being changed to any degree required for unloading the cane gradually onto the carriers.

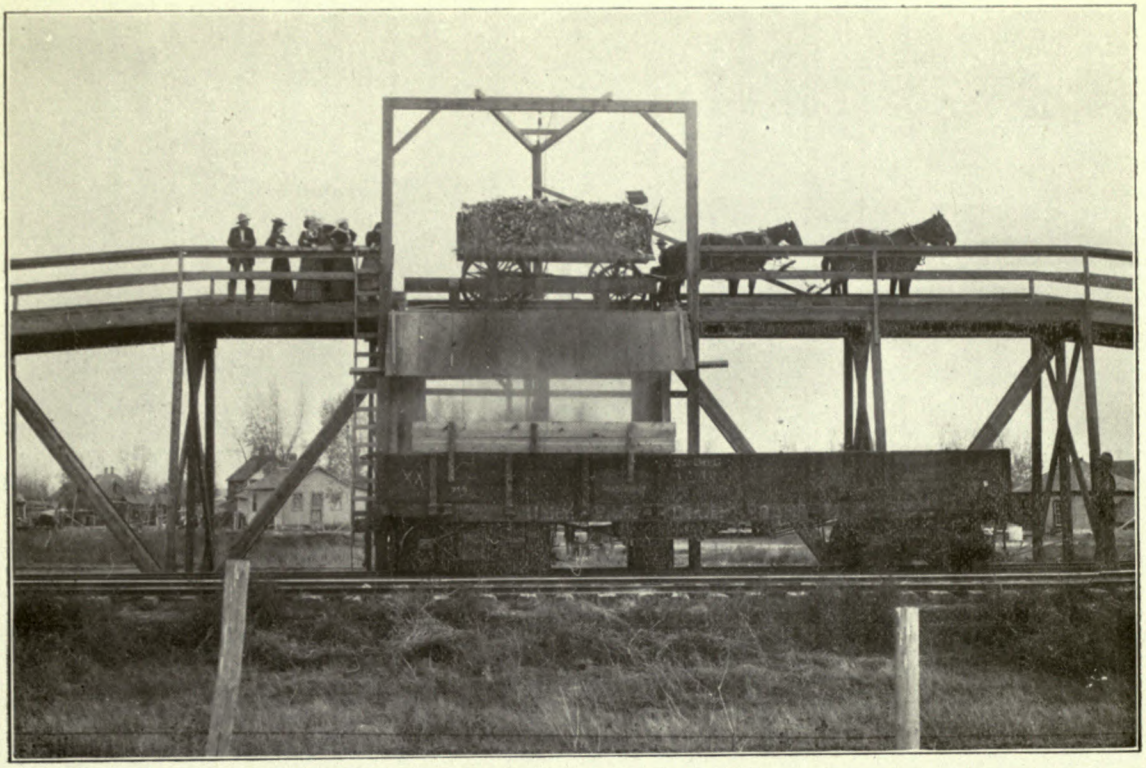
No beet sugar factory or cane sugar factory can afford to be without this equipment, for by means of it carloads and wagonloads of the materials can be dumped instantaneously into the bins, and traveling dumps or gangs of stationary dumps can be provided as desired, so that all of the bins can readily be served.

The Carroll system of dumping can be applied with advantage to handling trainloads of rock, earth, etc., enabling one or a few attendants to dump simultaneously a large number of cars, or to dump one or more loads at any desired point. Thus, a trestle, or a scow, or platform of any kind may be provided with dumping frames on each side tilting in opposite directions so as to dump at each side, either for unloading into vehicles, or vessels, or for building up a breakwater or embankment. Wagons can also be unloaded in large numbers by similar means.

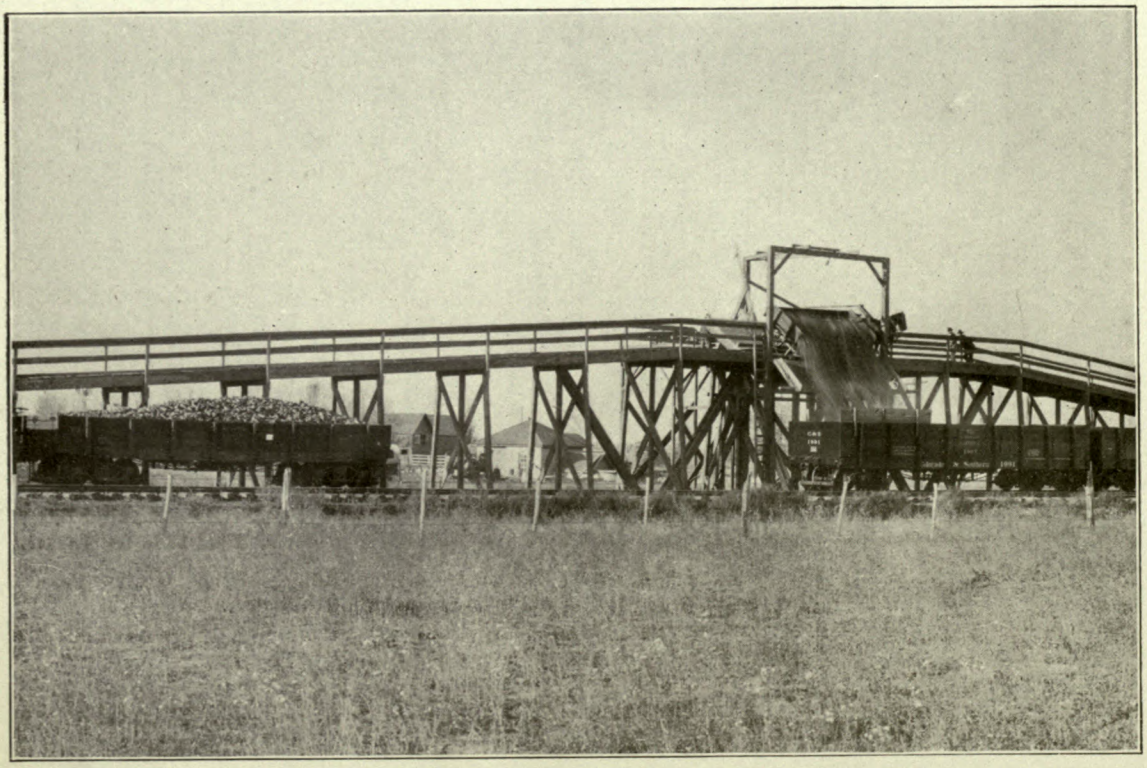
Where a number of teams are to be attended to, teams and wagons may be driven simultaneously onto the tilting frames on the opposite sides of the dump and both trainloads dumped at the same instant; or in case only the load from one team is to be dumped on one side and the load from two teams is to be dumped on the other side, the tilting frames will be appropriately connected and disconnected so that the dumping can proceed as desired.

The application of the invention in connection with scows is of especial importance, as it enables freight to be transferred in bulk to lighters or directly to vessels, with the utmost dispatch, and in building up a breakwater it enables the rock to be quickly unloaded from wagons or from cars, and permits the dumping to be concentrated at any particular part of the breakwater or to be effected simultaneously over the whole, as may be desired.

To load a vessel, a portable dumping-frame, placed on a scow, is loaded on both sides with cars, and the scow is pulled out alongside the vessel by a tug. The cars on one side are then dumped into the vessel, and the scow is then turned round and the cars on the other side dumped, suitable chutes being provided to run the material into the vessel.

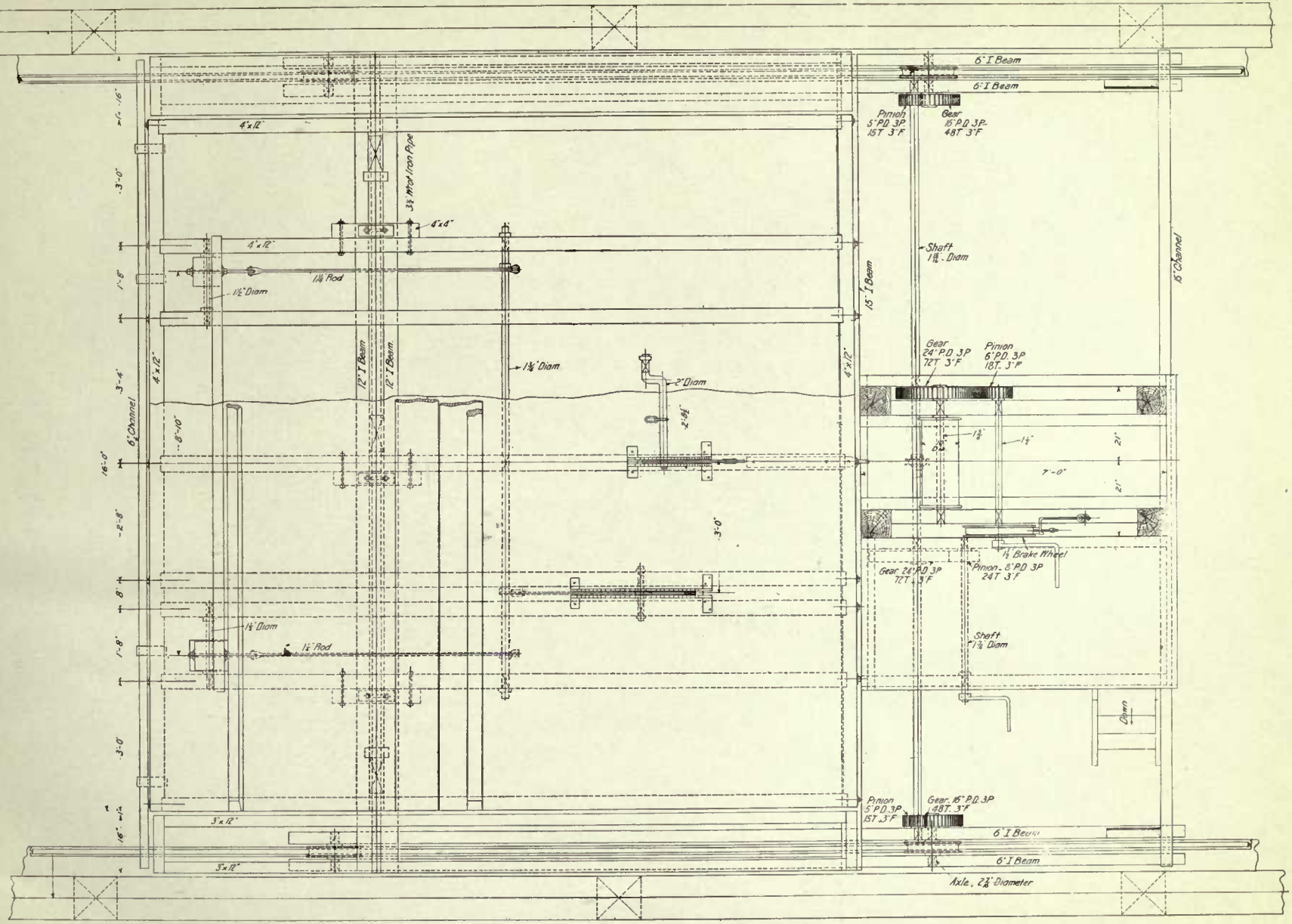


VIEW OF DUMP AND WAGON READY TO BE DUMPED. FARMER'S SPUR, COLO.

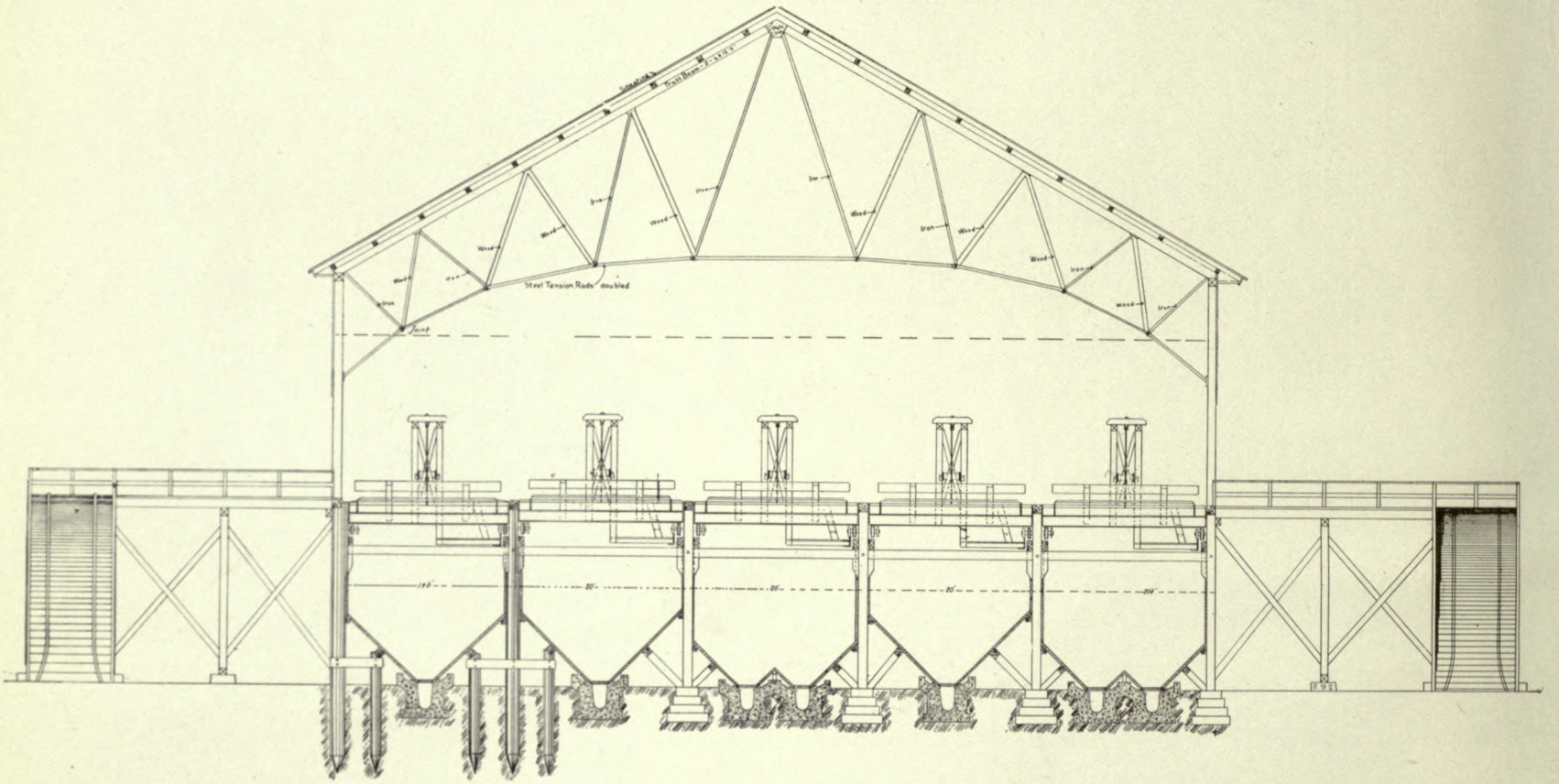


DUMP AT NEW WINSOR, COLO. DUMPING BEETS

T. Carroll's Patent Dumping Apparatus



PLAN OF PORTABLE DUMP ON BINS



SHOWS BINS WITH TRUSS ROOF OVER BEET SHED, AND DUMPING FRAMES ON TRACKS SO AS TO BE PORTABLE OVER BINS

In many large plants, such as beet sugar works, coal mines and yards, and ore mining and reduction works, the Carroll system is invaluable in facilitating rapid handling of the raw material, and to further expedite the dumping operations and provide for handling and storing the largest quantities of material in such plants with a minimum of labor and with the utmost rapidity, Mr. Carroll has devised a system of storage bins that can advantageously be used in connection with his special dumping apparatus.

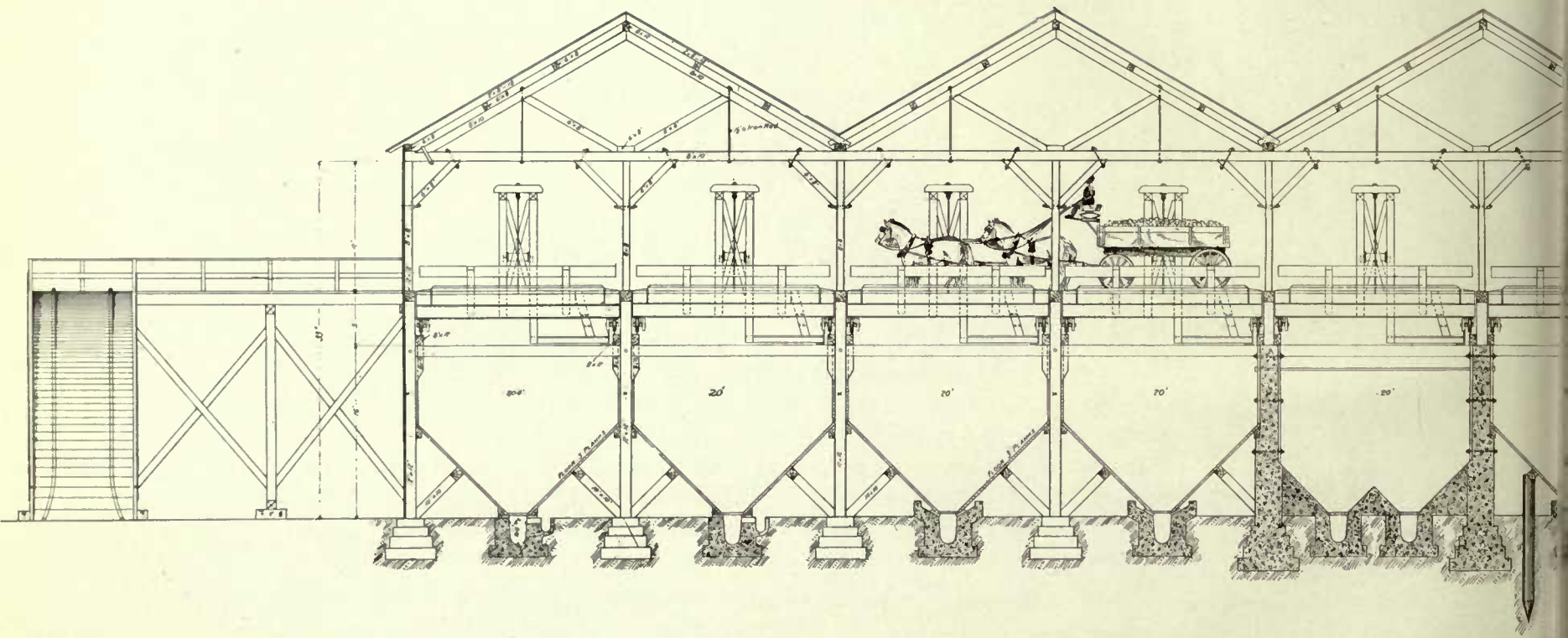
The bins, of any desired length, say several hundred feet, are built side by side in any desired number, a track or way being built along each bin, and the dump frames being mounted on trucks that travel along said tracks.

An elevated platform extends along and parallel to the outermost track at each side of the system, enabling the teams to come up one platform and descend from the other. The series of dump frames being placed end to end on the series of tracks constitute a movable roadway that may be shifted to any line across the bins, so that the bins can be gradually filled up along their whole length.

By the use of trestles carrying feeder tracks the same principle can be applied to unloading railway trains into bins.

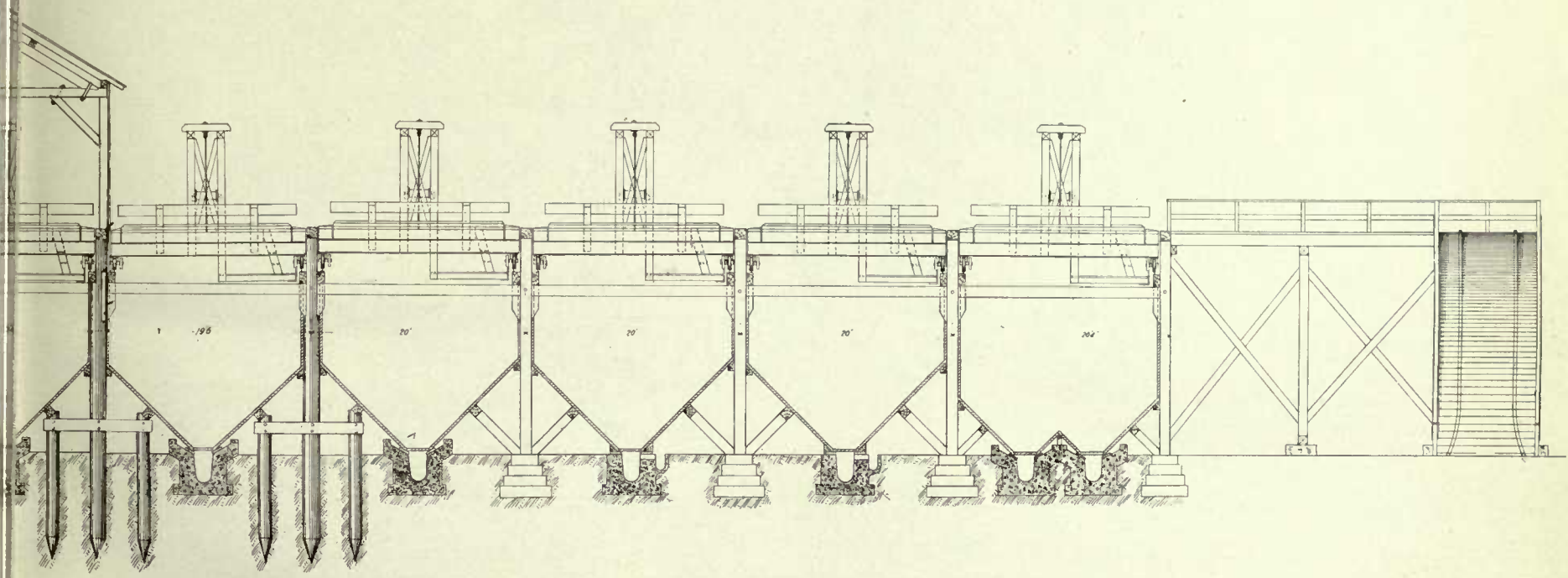
Any factory can save from $30,000 to $40,000 by using the Carroll system of beet dumps and bins. Four men, by this system, can unload and feed the flumes of a 1200-ton factory. We can prove our assertions to the satisfaction of any competent corps of engineers.

T. CARROLL'S PATENT



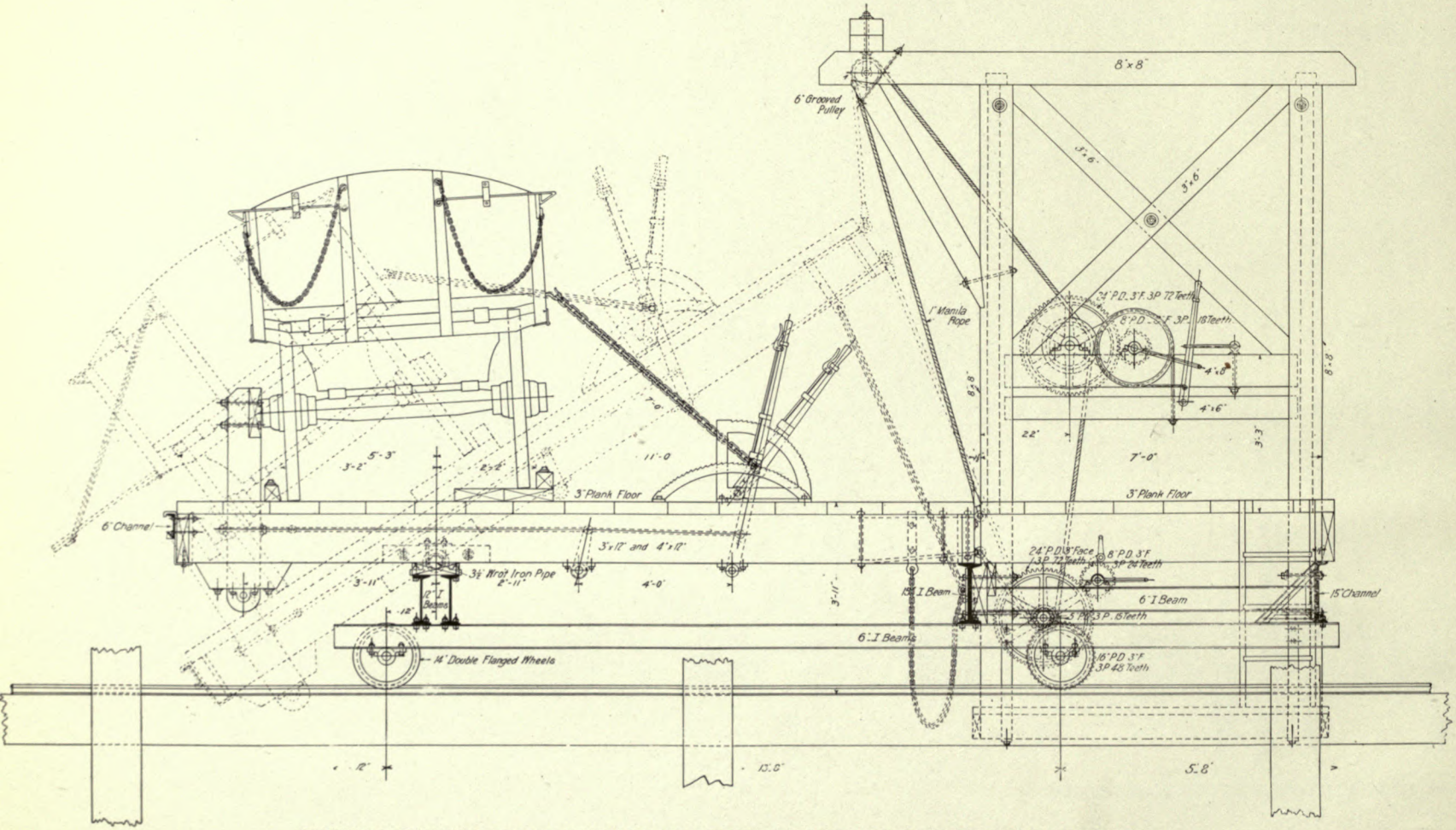
SHOWING SHED BINS AND YARD BINS, WITH

IUMPING APPARATUS



IPING APPARATUS PORTABLE OVER THE BINS

T. Carroll's Patent Dumping Apparatus



SHOWING DUMPING FRAME RUNNING ON TRACK, SO AS TO BE PORTABLE OVER THE BINS

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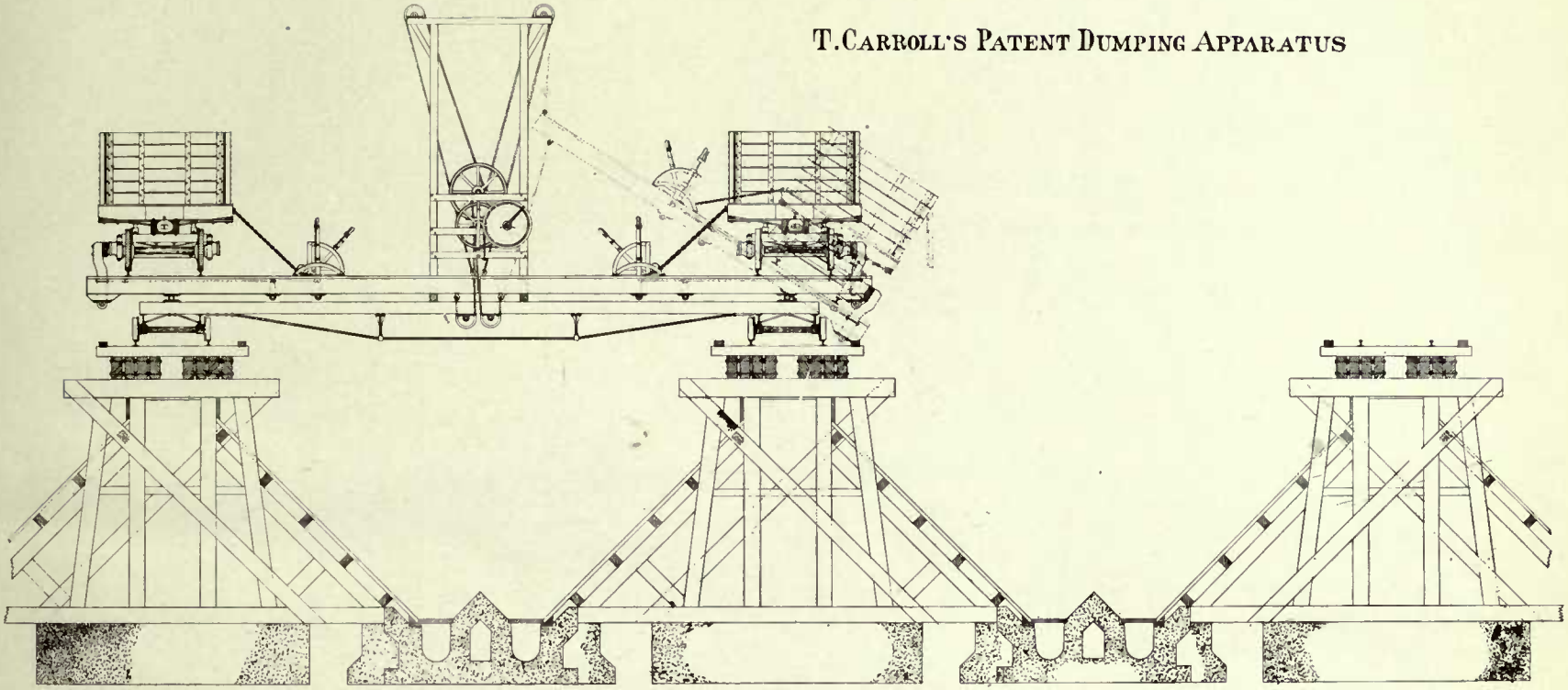
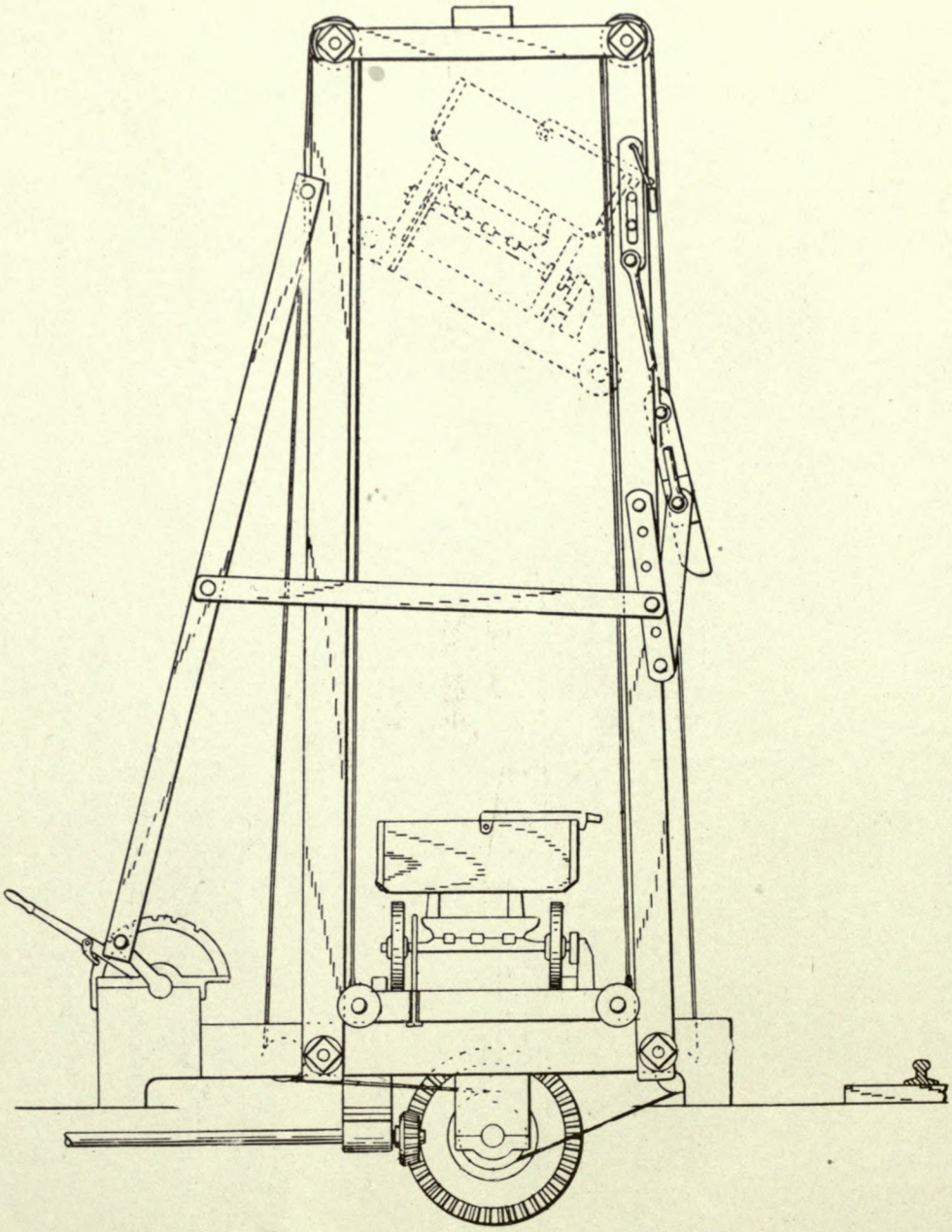
T. Carroll's Patent Dumping Apparatus

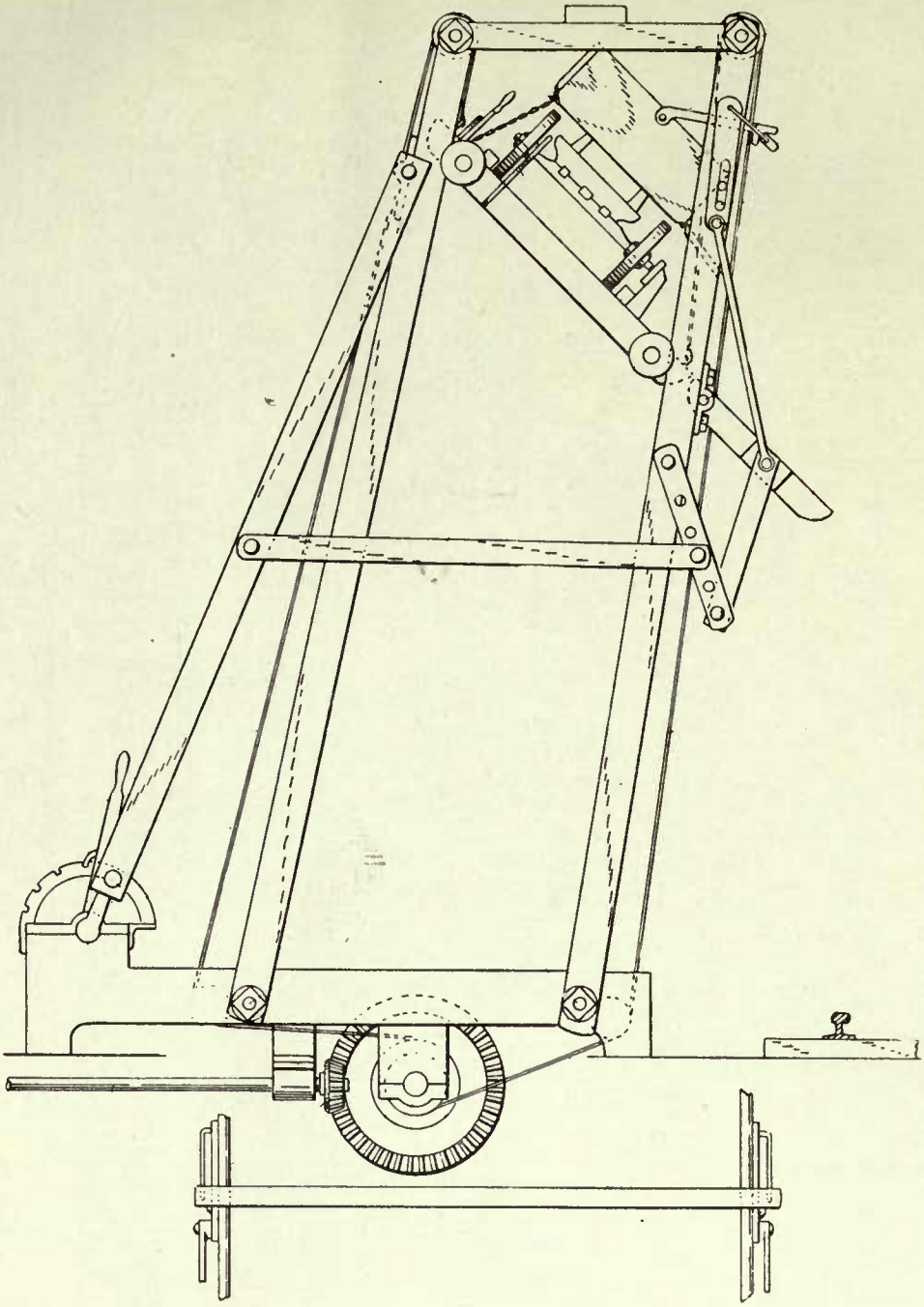


PORTABLE CAR DUMP

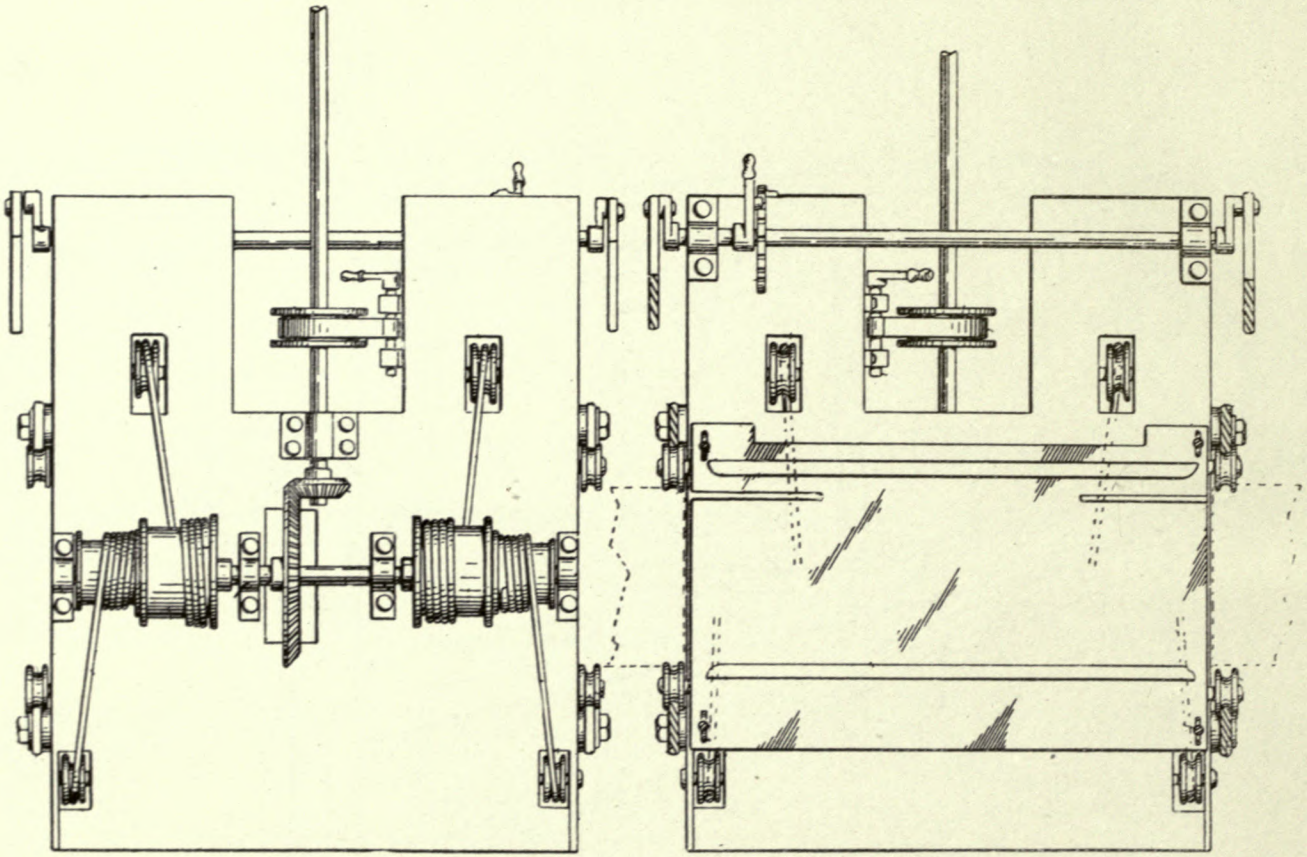
DUMPING FROM BOTH SIDES AND ONE OR MORE CARS AT THE SAME TIME



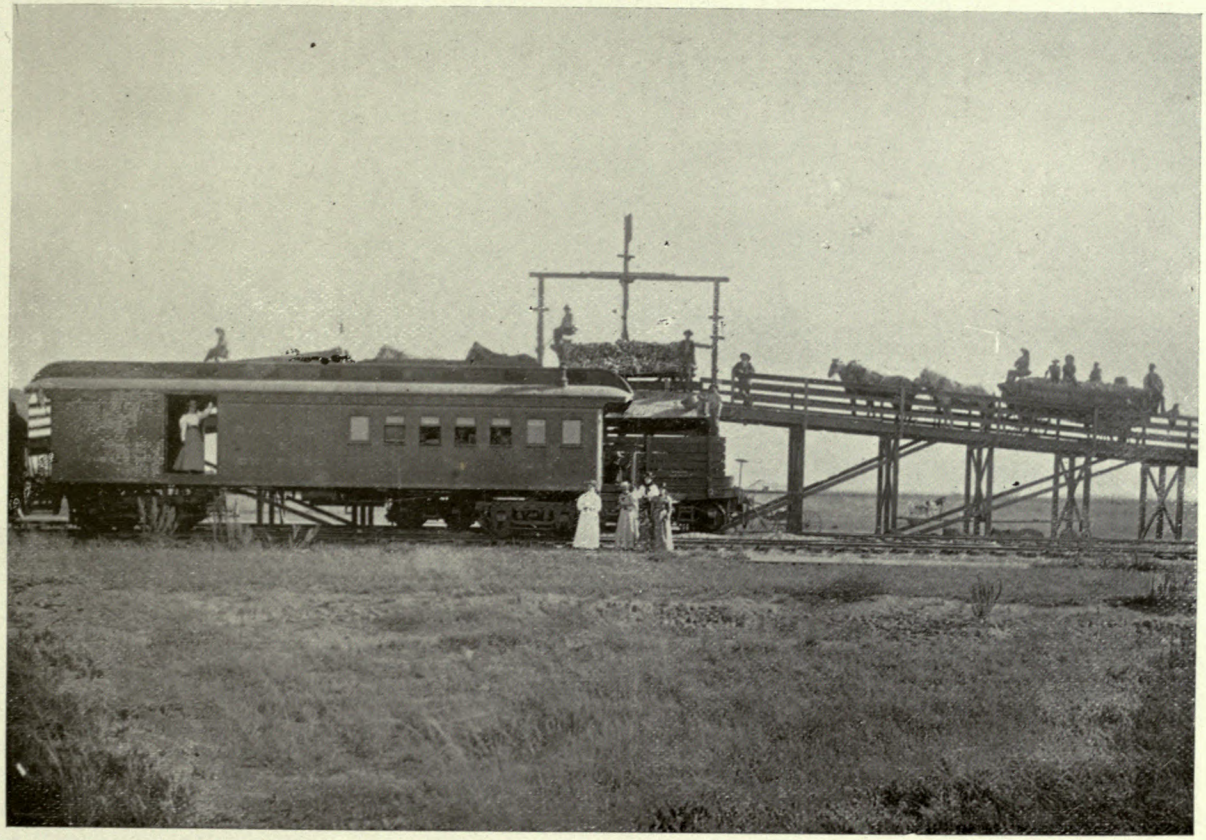
CARROLL'S PATENT ELEVATOR



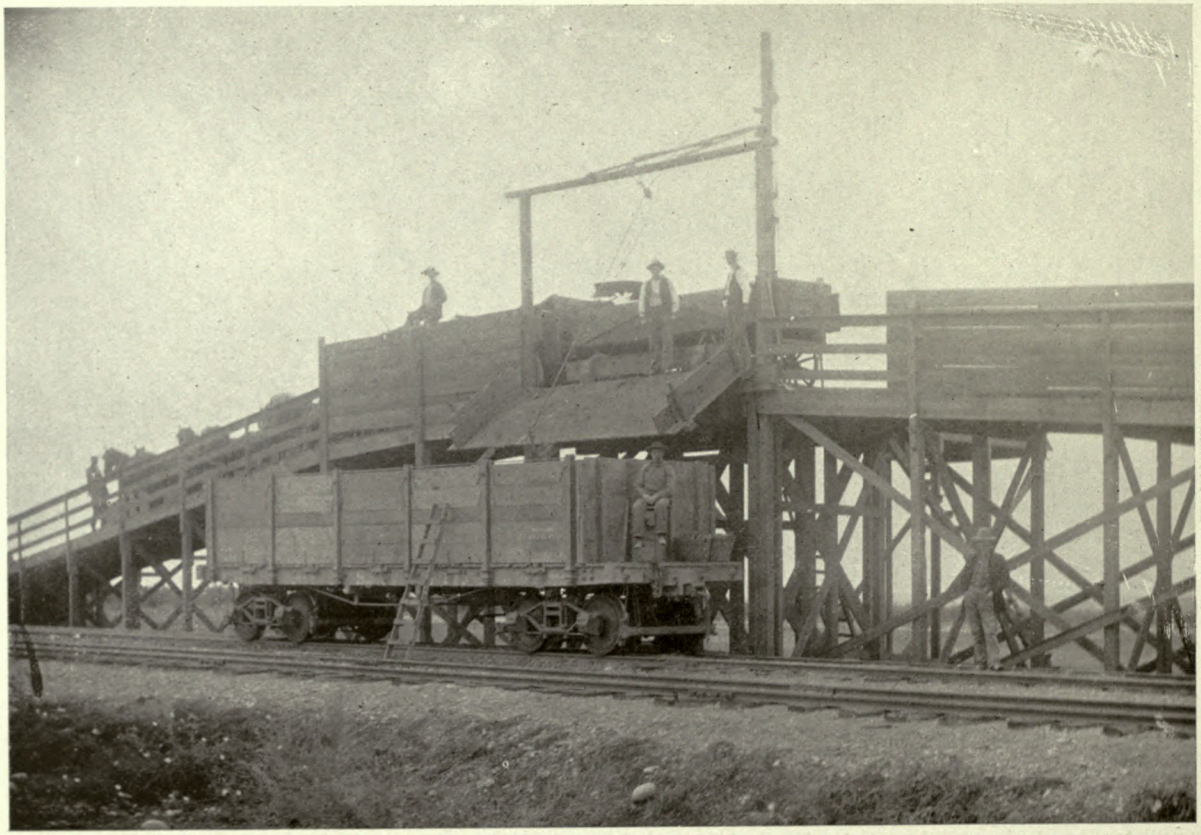
Where the material, such as beets, grain, coal, rock, etc., is to be dumped or unloaded at a considerable height, so that an inclined roadway to the dump is not practicable, an elevator is provided which takes the car or wagon, lifts it to the proper height by power, swings it over to one side if desired, and then dumps or unloads it, all this being done almost instantaneously by means operating under perfect control of the attendant.



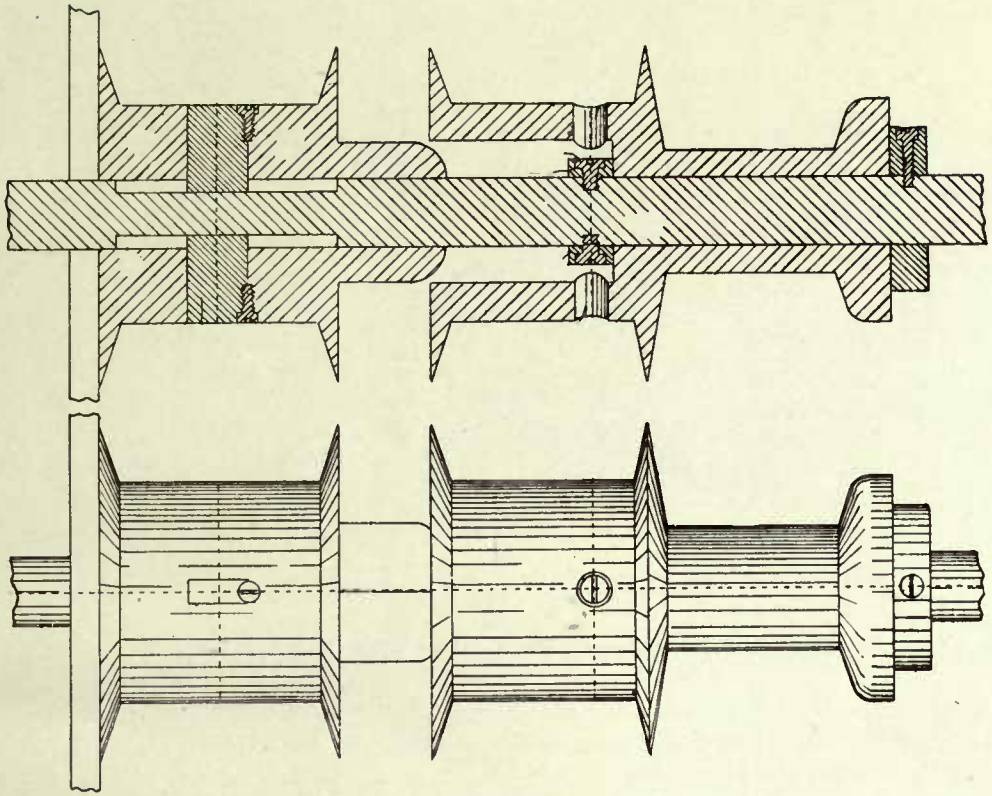
OPERATING GEAR AND DRUMS FOR ELEVATOR

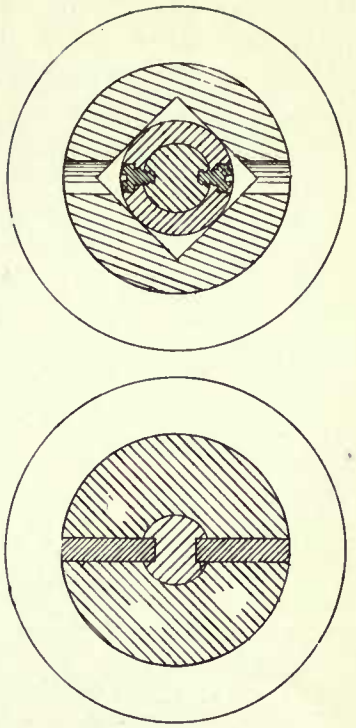


THE CARROLL DUMP AT BENEDICT, CAL.

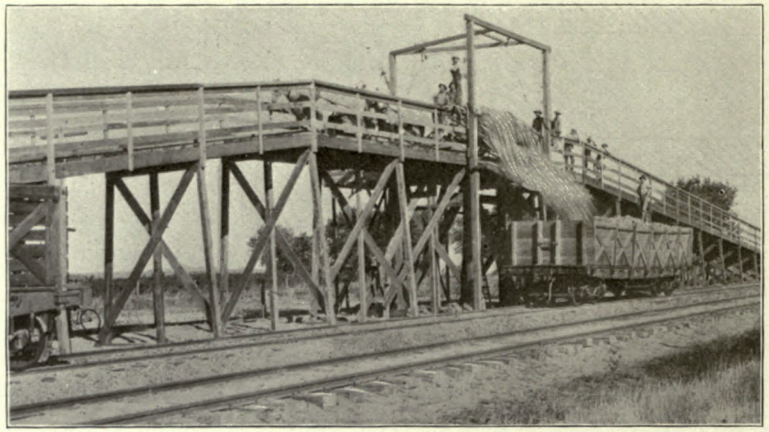


THE CARROLL DUMP AT MONTALVO, CAL.





In connection with this dumping system Mr. Carroll has patented a clutch, whereby a large number of winding spools may be arranged on a single shaft, and said spools be readily connected and disconnected to rotate with and to be free from rotating with the rotary shaft; said clutches being used to enable any one or more of the tilting frames to be operated independently or simultaneously as may be desired. This clutch may also be used for other purposes, and in fact is of general application wherever a clutch is desired.



THE CARROLL DUMP AT ROCKY FORD, COLO.

The Carroll Dump is the only one that will unload wagons faster than they can be weighed.

It is the only dump that can be used with any ordinary side-opening wagon or car. The Carroll system provides, however, a special wagon and car that can be advantageously used, and can also be used for the usual purposes.

The Carroll Dump is the only one that enables a wagon to be dumped in less than half a minute.

It is the only dump to which a little boy or girl can drive a team as well as a man—for the man there does all the work.

The following indorsements, from different parts of the United States, speak for themselves.

TESTIMONIALS

No Accidents or Delays

ANAHEIM, CAL., March 20, 1897.

Timothy Carroll, Esq.

DEAR SIR: With regard to your dumping apparatus, as used by the beet-growers of Anaheim and vicinity the past season of 1896, for unloading beets, I can say that it has given entire satisfaction, as it did also the year previous. There were no accidents or delays during the entire season, and the repairs were very light, being nearly altogether on account of the approach. The labor required to unload beets from the wagon into flat cars by your dump being so light, the Chino Valley Beet Sugar Co., took it upon themselves to do the same for the farmers without charge. It requires but two men to operate your dump and they can unload wagons as fast as they can be weighed and the tickets made out. The farmers could not be induced to go back to the old processes of unloading, so far as I can hear.

Very truly yours,

(Signed) G. W. SNYDER, Sec'y,
Anaheim Beet Growers of 1896.

Ten-Horse Teams, with Three Wagons, Unloaded in Three to Five Minutes

MONTALVO, CAL., January 18, 1898.

Timothy Carroll, Esq., Anaheim, Cal.

DEAR SIR: It is with pleasure that I recommend your unloading device to the public at large, especially beet-growers compelled to ship beets by rail. I know of no better, or safer and quicker loading device than that of your invention. We have used it here at Montalvo this season without any dissatisfaction whatever, unloading some twelve thousand (12,000) tons, and at times ten-horse teams with three wagons were unloaded with perfect satisfaction and rapidity, not taking more than five minutes to unload, without any effort made for speed, and no injury or strain sustained by the wagons, when properly operated.

Yours truly,

(Signed) A. F. MAULHARDT.

Gave General Satisfaction and Ran Smoothly

BUENA PARK, CAL., February 1st, 1896.

Mr. T. Carroll.

DEAR SIR: Your beet dump in use here last season was certainly a great improvement over the old system in saving of time and expense. It gave general satisfaction and ran smoothly. There were 5,500 tons of sugar beets loaded over it for the season, and it was operated by two men.

Yours respectfully,

(Signed) C. S. KENNEDY,
Agt. S. P. Co.

No Strain on the Wagon—The Wagon Support a Great Improvement

ANAHEIM, CAL., January 12, 1898.

Tim. Carroll, Esq., Anaheim, Cal.

DEAR SIR: Referring to your improved dumping apparatus, I wish to say that, as weighmaster for the Chino Valley Beet Sugar Co., at Benedict Station, I have had the opportunity of thoroughly testing your valuable invention, having also used the

Anaheim Dump two prior seasons to my entire satisfaction. I consider it far ahead of any dumping arrangement I have ever seen. Rapidity in working, ease and safety in handling, are two of its many excellent qualities. Your recent attachment for wagon support I consider a great improvement, as in dumping if reduces the strain on a wagon to a minimum.

Wishing you the success due you for this valuable labor-saving invention, I am,

Yery truly yours,

(Signed) A. C. BERTRAM.

The Driver Unaided Unloads in Two Minutes

LOS ANGELES, CAL., October 4, 1897.

Timothy Carroll, Esq., Anaheim, Cal.

DEAR SIR: Replying to your favor of the 2d inst., I will say that the beet dumping apparatus constructed in accordance with your patent and under your direction on the Cudahy Ranch near Florence, has proved to be a great success. It is a labor and money-saver of the first order.

We have thus far loaded seventy cars with it, without a slip, hitch or accident. We haul on each wagon from four to five tons of beets, which, upon his arrival at the dump the driver, unaided much of the time, unloads safely into the car in about two minutes. One man can operate it easily; two men could unload a wagon containing five tons or more every two minutes.

The dump is all right; all you recommend it to be, and we are very glad to have it.

Yours truly,

(Signed) J. W. HINTON,
Manager Cudahy Ranch.

Could Unload 100 Tons per Hour

ANAHEIM, June 25th, 1896.

Mr. Timothy Carroll, Anaheim.

DEAR SIR: The undersigned were the members of the committee elected by the beet growers around Anaheim to provide appliances for loading their beets upon platform cars from their wagons during the harvest of 1895. We made a careful examination of all appliances that could be used for the purpose, and finally selected your "patent dump" as the most feasible. We are glad to say that the apparatus worked to our perfect satisfaction.

It is very simple and easy to operate, and we could unload our wagons, containing from two to six tons each, at the rate of 100 tons per hour. At the close of the season, after unloading 18,000 tons of beets, the dump was in as good condition as when the first load was delivered.

(Signed)

J. W. HAWKINS, Chairman. S. D. WINTERS.
B. H. HISS. L. N. LONG.
T. J. JONES. THOMAS H. THOMSON.
E. F. KELLOGG. ANDREW GILLISON, Secretary.

A Great Success and Labor-Saver

CLAIR, January 12th, 1898.

Mr. Tim. Carroll.

DEAR SIR: In reply to yours of the 10th inst., will say that the beet dumping apparatus constructed in accordance with your patent, and under your direction, on the S. P. R. R. Co. track at Benedict station, is a great success. It is a labor-saving of the first order. We have this last season unloaded from wagons into cars, 8,000 tons of beets without any breakage or accident. We haul on each wagon from four to six tons of

beets, which, upon the arrival at the dump, I have, with the assistance of another man, unloaded from the wagons into cars in half minute, two men doing the work.

Yours very respectfully

(Signed) D. G. CASE,
Clair, Cal.

Gives Entire Satisfaction. It is the Best Dumping Apparatus for Unloading Beets into R. R. Cars

CHINO VALLEY BEET SUGAR CO.,
CHINO, CAL., January 19, 1898.

Testimonial.

The undersigned certifies herewith that the dumps, built by Timothy Carroll at our different shipping points around Anaheim, have given entire satisfaction. To my knowledge it is the best dumping apparatus for unloading beets into railroad cars.

(Signed) L. HACHE,
Mgr. Agr. Dept.

Most Successful Means for Handling Tonnage

ANAHEIM, CAL., June 22, 1896.

Mr. Tim. Carroll.

DEAR SIR: I will say just a few words in regard to your combination side dump and unloading apparatus, as I had charge of same last season.

I must say it is a grand success over any other way of unloading beets into cars. In 1894 I also had the experience of unloading beets by use of the net hoist and barrels, it taking five minutes at the best to unload a load with the net from the time the team was stopped on the dump till it was ready to start. Again, it also required three men and one team to do the unloading, while on the side dump, two men unloaded a five-ton load in thirty seconds, ready for the team to move on.

One thousand tons could easily be unloaded per day on one dump, if cars and teams were always in readiness. It is certainly the most successful means for handling tonnage. Any further information or explanation I will willingly give with the greatest of pleasure.

Yours respectfully,

(Signed) B. H. HISS,
Supt. Anaheim Beet Growers Association,
Anaheim, Cal.

"I Have Seen Many Different Methods, But Your Patent Dump Excels Them All."

ANAHEIM, CAL., October 17, 1896.

T. Carroll, Esq., Anaheim, Cal.

DEAR SIR: I take pleasure in stating that your patent "dump apparatus," which we have used this year for unloading sugar beets, from the wagons into railroad cars, for shipment to Chino, has given entire satisfaction in every respect. I have seen many different methods used for doing this work, but your patent dump excels them all, it being the quickest and by far the cheapest way. In Anaheim and vicinity we have unloaded 17,000 tons of beets by it this season.

Yours very truly,

(Signed) JOHN T. SCHROEDER, Weighmaster,
Chino Valley Beet Sugar Co.

Wagonload Dumped in 30 Seconds

ANAHEIM, June 29th, 1896.

Mr. Timothy Carroll, Anaheim, Cal.

DEAR SIR: I am pleased to state what I know from personal observation in regard to the working and operation of your patent "load dumping apparatus," as used in the shipment of sugar beets from this station to Chino, in season of 1895, which aggregated 18,380 tons, or 989 carloads. This quantity

could not have been handled by the old methods for unloading from wagons to cars with derrick and net process, and shovels, and the expense for handling with your apparatus was a very large percentage less than the old system, per ton. And labor was performed by two men.

It was not an uncommon performance to discharge a three to five-ton wagonload into cars in thirty seconds, with your tilting platform, whereas, by the ordinary method, from twenty to thirty loaded wagons were frequently left at the works over night.

Everything worked satisfactory during entire season without accident or breakage.

Your patented principle could be used economically by railroad companies and mining concerns I think, for dumping open carloads of coal or rock or similar commodities.

Yours respectfully,
(Signed) T. A. DARLING,
Agt. S. P. Co.

Load Dumped in 28 Seconds

WINDSOR, COLO., May 6th, 1903.

Mr. Tim. Carroll.

DEAR SIR: In regard to the beet dump for dumping wagonloads of beets into cars or other receptacles which you have, I can say that there is none better or as good as your device, and to any farmer who is raising beets, rather than being without them, I would insist on the sugar companies using them, or else go without beets. Mr. G. Austen and myself, who had charge of the dump in the fall of 1901, dumped a load in twenty-eight seconds from the time it came onto the dump. This was done by Prof. Carpenter's watch, who was on the dump at that time.

I hope the farmers will remember that now is the accepted time to have them put in, while the business is new.

I wish you every success, and remain,

Yours truly,
(Signed) H. C. BRANCH.

Keeps the Teams Moving

BERTHOUD, COLO., May 4, 1903.

Tim. Carroll, Esq.

DEAR SIR: In regard to the Carroll Beet Dumping device, will say, last fall I had charge of the dump at Johnson siding on the G. W. Sugar Co.'s railroad. We dumped 4,749 wagonloads, making 396 cars.

The dump worked perfectly. We weighed, dumped and weighed back forty-three wagonloads in forty-one minutes, and after dark at that. Mr. Henry Coote, W. H. Fearris and W. Hickox were present at the time and can testify to the same.

We often started three teams up the dump, and dumped the two head ones without stopping the third team, till it stopped on the platform.

Yours respectfully,
(Signed) M. D. WHIPPLE,
Weighmaster, Johnson Dump.

One Man Can Handle the Dump

LOVELAND, COLO., October 24, 1901.

To Whom it May Concern:

This is to certify that we are using five of the Carroll Dumps for the unloading of beets out of wagons into cars. I am frank to say that it is certainly one of the best methods for unloading into cars that I have ever seen. We are able to dump wagons containing from three to four tons in less than a minute, one man handling the dump; and I should say that it is very strong and durable, and is a great labor-saving device. Mr. Carroll certainly understands his business and has made a success of this matter.

(Signed) MARK AUSTIN,
Agr. Supt.

The Best Dump on Earth

LONGMONT, COLO., November 20, 1901.

Mr. Tim. Carroll.

DEAR SIR: In reply to your favor of recent date regarding your beet dumping apparatus, will say I have had charge of one for the past two years. For simplicity, durability, rapidity, and economy it, in my judgment, cannot be excelled.

I have dumped many wagons of five and six tons net weight. Have never had an accident after dumping 3,000 wagonloads.

My dump is ready at any moment for loads. Wishing you success with the *best dump* on earth, I am, sir,

Very truly yours,

(Signed) CHAS. MAYFIELD,

Ex-Dump Man, Bœttcher Dump, near Longmont, Colo.

Its Capacity is Good for One Load Per Minute. Unloaded 30 Loads in 31 Minutes

MARION, COLO., May 8, 1903.

This is to certify that I had charge of the beet dump at the Marion siding, on the Colorado Southern railroad for the Great Western Sugar Factory, and find that the Carroll Beet Dumping device works perfectly. Its capacity is good for one load of beets per minute. I was dump man there, and I unloaded thirty loads of beets in thirty-one minutes, and moved and changed cars in that time in the presence of Ed. Spotts, Joe Boyd and Charlie Cluster. There were three teams on the dump at the same time, one going down, one dumping, and one coming up the dump.

For the safety of wagons and speed in unloading, the Carroll Beet Dumping device cannot be excelled. The farmers say if there was no beet dump here, there would be no beets raised.

(Signed) L. C. LANDIS.

I Can Load 30-Ton Car in 15 Minutes. The Farmers Could Not Afford to Grow Beets Without It

TIMNATH, COLO., May 6th, 1903.

Mr. Tim. Carroll.

DEAR SIR: I had charge of your beet dump here last fall and would say in regard to its working that I think it would be impossible to beat it. The farmers could not afford to grow sugar beets without it. They can use any kind of a wagon with a flat bottom, and can be dumped faster than they can be weighed (about one-third of the wagons dumped here were hay racks, and I never had any difficulty with them).

I am also willing to bet that I can load a car of thirty tons capacity in fifteen minutes, providing the weighmaster can weigh them.

Very truly yours,

(Signed) W. S. DARNELL.

Satisfactory Both to Growers and Company

ROCKY FORD, COLO., May 6, 1903.

Mr. Tim. Carroll,

Care Vulcan Iron Works, Denver, Colo.

DEAR SIR: I found yours of the 29th ult. upon my return from the eastern end of the Valley, and in reply wish to say that your Dumping Apparatus has proven exceedingly satisfactory to the beet growers, as well as to the company, and that I consider it a great labor-saving machine and of considerable value to all beet growers.

As to the length of time required for dumping, this depends entirely on the man in charge of the dump, and I would say that it will take from one minute to one and one-half minutes to dump a load after the wagon has stopped upon the platform.

Yours truly,

AMERICAN BEET SUGAR COMPANY,

(Signed) W. K. WINTERHALTER,

Agricultural Supt.

Dumps Faster Than Loads Can Be Weighed

GREELEY, COLO., May 7th, 1903.

Mr. Tim. Carroll.

Dear Sir: In regard to the Beet Dump you build, I will say there are none better for dumping beets, if using the proper wagons. I have run one for two falls, and can safely say that I can dump wagons faster than any weighmaster can weigh the loads and make out the tickets. I have dumped loads weighing over 5,000 lbs. in 10 seconds. I loaded 224 cars last fall, 1902. I think that any community raising beets should have one of Mr. Carroll's Dumps by all means. They will save labor and money to beet raisers and haulers. I have been in charge of dump at Farmer's Spur, on C. & S. R. R., for two years.

Yours respectfully,

(Signed) CHAS. C. NEFF.

Dumps in Less Than Half a Minute

GREELEY, COLO, May 7, 1903.

Tim. Carroll.

DEAR SIR: In regard to your Beet Dump I can say it is a perfect satisfaction, as I had charge of the one at Boyd's Spur last year. We could dump a load in less than half a minute and the wagons are light and handy and make good all-purpose wagons. The farmers have increased the beet average nearly half since the Dump was built last year.

Respectfully yours,

(Signed) R. W. BOYD.

As Fast as the Scales

LOVELAND, COLO., May 4, 1903.

Mr. Tim. Carroll.

DEAR SIR: During the falls of 1901 and 1902 I had charge of one of your Beet Dumping devices. I can say that I consider them a success.

I never timed the capacity of them, but know that they are as fast as the scales for weighing the beets. They also allow the farmer to use the lightest possible beet box, thereby saving many dollars in horseflesh.

Yours truly,

(Signed) U. S. HANKINS,
Weighmaster Campion Dump.

Carroll Wagons Can Be Used for Any Purpose

DILLEY CHAPEL, May 5, 1903.

Mr. Tim. Carroll, Loveland, Colo.

DEAR SIR: I wish to say in regard to your Beet Dumping device that it is entirely satisfactory to farmers. They could not afford to grow the beets if they did not have your Dump. Beets can be unloaded faster than they can be weighed. Also your wagon beds can be used for any purpose, they are so light and handy.

(Signed) W. A. PURVIS,
Weighmaster Pulliam Dump.

Can Dump Beets Faster Than They Can Be Weighed over the Scales—Wagon Bed is Light and Handy

RAGANS SIDING, Apr. 5, 1903.

Mr. Tim. Carroll, Loveland, Colo.

DEAR SIR: Regarding your Beet Dump and its working, I will say that I can dump beets faster than they can be weighed over the scales, or in other words, as fast as they can be brought to me.

Also I wish to state that your wagon bed is light and neat and can be used for any purpose.

(Signed) A. G. GOTCHY.

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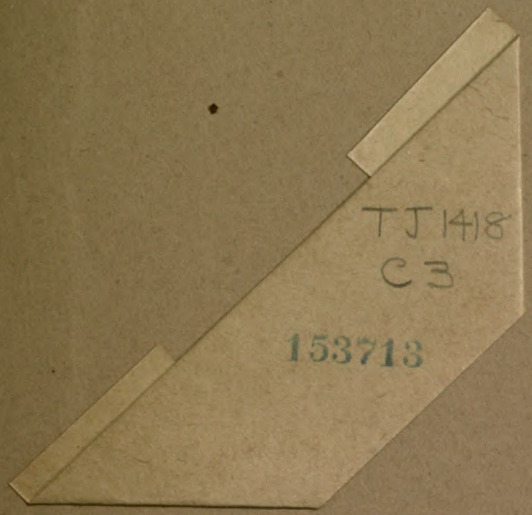
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